

QoS SCHEDULER AND METHOD FOR IMPLEMENTING PEAK SERVICE DISTANCE USING NEXT PEAK SERVICE TIME VIOLATED INDICATION

Abstract of the Disclosure

A scheduler and scheduling method implement peak service distance using a next peak service time violated (NPTV) indication. A flow scheduled on a best effort or weighted fair queue (WFQ) is identified for servicing and a frame is dispatching from the identified flow. A next PSD time (NPT) being violated is checked for the flow. Responsive to identifying the next PSD time (NPT) being violated for the identified flow, a NPTV indicator is set.

5 Alternatively, responsive to identifying the next PSD time (NPT) not being violated for the identified flow, the NPTV indicator is reset. A next PSD time (NPT) value is calculated for the flow. Checking for more frames to be dispatched from the flow is performed. Responsive to identifying no more frames to be dispatched from the flow, the NPTV indicator is utilized to

10 identify a calendar for attaching the flow upon a new frame arrival for the flow. If the NPTV indicator is not set when the flow goes empty, upon a new frame arrival for the flow, the flow is attached to a weighted fair queue (WFQ) ring using a queue distance calculation. If the NPTV indicator is set when the flow goes empty, upon a new frame arrival for the flow, then it is

15 determined if the next PSD time (NPT) value for the flow has been passed. If the next PSD time (NPT) value has been passed, then the flow is attached to the weighted fair queue (WFQ) ring using the queue distance calculation. If the next PSD time (NPT) value has not been passed, then the flow is

20 attached to a peak bandwidth service (PBS) calendar using the next PSD time (NPT) value.

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